

REMARKS

This application was filed with 36 claims. Claims 1,2, 6-16, 19 , 20, 22, 24-34 have been rejected. Claims 1 has been amended. Claims 1-36 are pending in the Application. Reconsideration of the application based on the claims as amended and arguments submitted below is respectfully requested.

Claim Rejections - 35 U.S.C. § 102

Claims 1,2, 6-16, 19 , 20, 22, 24-34 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Elion (USP 5140890). Furthermore, claims 1 and 2 are rejected under 102 (e) as anticipated by Celi (USP 6787690). Applicant respectfully request withdrawal of the rejections for all the claims for the following reasons.

The rejection of Claims 1,2, 6-16, 19 , 20, 22, 24-34 under 35 U.S.C. § 102(b) as met by Elion should be withdrawn. First, as shall be seen from the following discussion, Elion cannot anticipate the claims. Elion's device was not designed to deal with digital guitar signals produced by a digital guitar. Instead, Elion is a device for communicating conventional analog guitar signals to external music processors. Nowhere does Elion contemplate solving the problems associated with using a digital guitar with conventional guitar equipment. Since Elion was designed for a substantially different purpose, Elion simply does not disclose the required claim limitations.

As to claim 1, 7-16, and 25, all require that the interface input assembly be adapted to receive a predetermined number of *digital* string signals. In contrast, Elion discloses that “the input to terminal 36 is derived from a hexaphonic magnetic pickup mounted on the guitar controller. Thus, there is a pickup adapted to transmit the characteristic acoustic signal for each of the strings LE through HE, and each of these string inputs is separately applied to its own individual string processing channel.” Elion, Column 2, ll. 54-60. As a result, Elion does not input digital string signals. It inputs analog string signals from conventional hexaphonic magnetic pickups. Elion, Column 2, ll. 54-56.

As to claim 2, the microcontroller in Elion does not receive a digital signal much less a digital signal formatted according to a communication protocol. Instead, the processing circuit receives values extracted from an analog signal and creates the formatted MIDI signal from the extracted analog values. Elion, Column 4, Lines 57-64. Consequently, the processing circuit does not receive digital string signals.

As to claim 6, the claim requires an interface device processing circuit adapted to generate external digital signal based on external analog signal, and then to format the external digital signals to be compatible with a predetermined number of digital communication protocols. Elion does not have such a device. Instead, characteristics of the analog signal are extracted whereupon the microprocessor creates the appropriate MIDI signal from the extracted audio

characteristics. Elion, Column 4, ll 57-67. Consequently, the device does not format digital signals.

Next, claims 19,20, 22, and 25-34 require that the interface device formatting circuit receive digital string signals. Elion is missing this claim limitation. In the claims, the interface device formatting circuit receives *digital* string signals and formats the signal to a predetermined digital communication protocol. However, Elion discloses a device for formatting analog string signal into a digital MIDI signal. The analog signals are never separately converted into digital signals and then subsequently formatted into digital signals. Instead, characteristics of the analog signal are extracted whereupon the microprocessor creates the appropriate MIDI signal from the extracted audio characteristics. Elion, Column 4, ll 57-67. Consequently, Elion does not disclose an interface device formatting circuit adapted to receive digital string signals.

As to claims 8 and 26, the claims require that the interface device processing circuit be adapted to control the analog output signals with input digital control signals. Elion does not disclose digital control signals much less controlling an audio signal with digital control signals.

Next, Claim 24 requires an interface device formatting circuit adapted to format the external digital signals to be compatible with the predetermined number of digital communication protocols and to output the external digital signals. In Elion the separate formatting circuit is unnecessary. The MIDI formatting is done directly from the characteristics of the analog signal. No digital signals exist until

after the microcontroller uses the characteristics of the analog signal to create MIDI code. As a result, there cannot be a formatting circuit which is adapted to format external digital signals.

Second, the examiner has rejected claims 1 and 2 based on Celi. Applicant believes that the amendments and remarks clearly indicate that the subject matter of the claims is patentable over Celi. First, the applicant has amended claim 1 to clarify that the interface input device receives a number of external digital string signals. External thus clarifies that the digital string signal originated from a source outside of the breakout box. Examiner argues that the interface input assembly and the interface device processing circuit are both found in the digital signal processor 120 of Celi. As amended, the interface device input assembly must be adapted to receive a number of external digital string signals. Consequently, the digital signal processor 120 in Celi cannot meet the claim limitations. Celi converts analog signals input from the guitar bridge into digital signals utilizing analog to digital converters. Celi, Column 6, ll. 50-56. These signals are then input into the digital signal processor 120. Id. Thus, the digital signal processor 120 does not receive a signal external to the system. As a result, the digital signal processor 120 cannot have an interface device input assembly. This is a significant difference since one of the primary purposes of the invention is dealing with external digital signals created by an instrument. Next, the interface device processing circuit is adapted to generate a predetermined number of analog string signals based on the digital string signals. In Celi, analog signals are created from the digital signals

outside of the digital signal processor 120. Celi utilizes a digital to analog converter 215 to convert the digital signals into analog signals. The processing circuit 120 is thus not adapted to convert digital to analog signals. In fact, in Celi the digital signal processing circuit 120 only manipulates sound tone. Celi, Column 5, ll. 18-24.

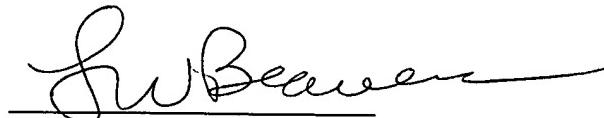
Furthermore, Celi cannot anticipate claim 2. In claim 2, the digital string signals are formatted to be compatible with a single digital communication protocol. In Celi, the digital signal processor manipulates sound tone. Celi, Column 5, ll. 18-24. The digital to analog converter is the device which converts the signal from digital to analog. Celi, Column 7, ll. 13-16. Celi does not disclose that either device places is adapted to place the signal into a digital communication protocol.

Allowable Subject Matter

Applicant has commented on some of the distinctions between the cited references and the claims to facilitate a better understanding of the present invention. This discussion is not exhaustive of the facets of the invention, and Applicant hereby reserves the right to present additional distinctions as appropriate. Furthermore, while these remarks may employ shortened, more specific, or variant descriptions of some of the claim language, Applicant respectfully notes that these remarks are not to be used to create implied limitations in the claims and only the actual wording of the claims should be considered against these references.

The Commissioner is authorized to charge any deficiency or credit any overpayment associated with the filing of this Response to Deposit Account 23-0035.

Respectfully submitted,



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Lucian Wayne Beavers

A handwritten signature in black ink, appearing to read "lwBeaver".

Signature
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A handwritten date in black ink, appearing to read "June 27, 2006".
Date